MULTIMEDIA UNIVERSITY

STUDENT IDENTIFICATION NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2017/2018

BFN 2054 – PORTFOLIO MANAGEMENT

(All sections/ Groups)

15 MARCH 2018
2:30PM – 4:30PM
(2 Hours)

INSTRUCTION TO STUDENT

1. This Question paper consists of **3** pages with **5** questions.
2. Attempt all the questions. The distribution of the marks for each question is given.
3. Please answer all questions in the Answer Booklet provided.

Please answer all the questions

Question 1 (15 marks)

a) Cat stock's dividend at the end of this year is expected to be RM2.15, and it is expected to grow at 11.2% per year forever. If the required rate of return on Cat stock is 15.2% per year, what is its intrinsic value? (5 marks)

b) If Cat's current market price is equal to this intrinsic value, what is next year's expected price? (5 marks)

c) If an investor were to buy Cat stock now and sell it after receiving the RM2.15 dividend a year from now, what is the expected capital gain in percentage terms? What is the dividend yield, and what would be the holding period return? (5 marks)

Question 2 (20 marks)

a) When discussing the principles of portfolio management, what are the seven classes of investors? (10 marks)

b) Briefly explain the strategies that active manager can use to add value to his portfolios? (10 marks)

Question 3 (20 marks)

a) Ismail is considering the addition of international investments into Yeo's portfolio. He explains to Yeo his methodology for developing capital market expectations and determining a recommended asset allocation. In his approach to developing capital market expectations, Ismail utilizes sample statistics from the most recent twenty years of market, security, and foreign exchange price data as estimates of asset class expected returns, expected volatilities of returns, and expected correlations of returns.

i) Give two specific limitations of Ismail's approach to developing capital market expectations. (8 marks)

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b) Ismail recommends that Yeo consider a possible allocation of investment assets to Hong Kong real estate, because prices of real estate tend to lag returns from the stock market. With the Hang Seng Index registering strong positive returns recently, Ismail expects that the wealth gains from the equity market will now be a positive factor for real estate prices.

i) Identify one problem in using historical estimates of return correlations for alternative assets such as real estate. Explain how that problem biases the formulation of expectations for real estate investments. (6 marks)

c) Ismail shows Yeo an economic research report recently published by his firm; the report contains the following conclusion: 'because of recent speculative forces on the Malaysian ringgit (RM), it is highly likely that Malaysia will impose sustained currency controls to regulate the flow of capital into the country.'

i) Judge, given the likelihood that Malaysia will impose sustained currency controls, whether Yeo should lower, not change, or raise her expected long-term investment risk premiums. Support your response with one reason. (6 marks)

Question 4 (25 marks)

You have been assigned to compare the performance of three different pension fund. After gathering 60 months of excess returns (i.e. returns in excess of the monthly risk-free rate) on each fund as well as the monthly excess returns on the entire stock market, you perform the regressions of the form:

$$(R_{fund} - RFR)_t = \alpha + \beta(R_{mkt} - RFR)_t + \epsilon_t$$

You have prepared the following summary of the data, with the standard errors for each of the coefficients listed in parentheses.

Regression Data				$(R_{fund} - RFR)$	
Portfolio	α	β	R^2	Mean	σ
A	0.296	0.785	94.8	0.890	0.890
	(0.14)	(0.12)			
B	0.355	0.757	6.41	0.955	1.044
	(0.22)	(0.08)			
C	0.463	0.594	68.6	0.935	0.793
	(0.19)	(0.07)			

a) Which fund had the highest degree of diversification over the periods? How is diversification measured in this statistical framework? (6 marks)

b) Rank these funds' performance according to the Sharpe, Treynor, and Jensen measures. (9 marks)

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c) Since you know that according to the CAPM the intercept of these regressions (i.e. alpha) should be zero, this coefficient can be used as a measure of the value added provided by the investment manager. Which funds have statistically outperformed and underperformed the market using a two-sided 95 percent confidence interval? (note: the relevant t-statistic using 60 observations is 2.00)

(10 marks)

Question 5 (20 marks)

Suppose that the universe of available risky securities consists of a large number of stocks, identically distributed with E(r)=15%, σ=60%, and a common correlation coefficient of ρ=0.5.

a) What is the expected return and standard deviation of an equally weighted risky portfolio of 25 stocks? (5 marks)

b) What is the smallest number of stocks necessary to generate an efficient portfolio with a standard deviation equal to or smaller than 43%? (5 marks)

c) What is the systematic risk in this universe? (5 marks)

d) If T-bills are available and yield 10%, what is the slope of the capital allocation line? (5 marks)

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